

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NORA L. CARROLL,
HYUN S. LIM,
GEORGE J. OSTAPCHENKO,
SHAILAJA R. VAIDYA,
J. MICHAEL MCKENNA,
JOHN J. CURRO,
GARY D. LAVON,
and
RICHARD L. SPARKS

Appeal No. 2003-0577
Application No. 09/194,378

ON BRIEF

Before OWENS, DELMENDO, and POTEATE, Administrative Patent Judges.

DELMENDO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134
(2002) from the examiner's final rejection of claims 27 through

36 (final Office action mailed Dec. 3, 2001, paper 19), which are all the claims pending in the above-identified application.¹

The subject matter on appeal relates to a breathable composite sheet material. According to the appellants, the composite sheet is useful in apparel, surgical drapes, sterile wraps, packaging materials, protective covers, construction materials, and personal care absorbent articles such as diapers and sanitary napkins. (Specification, page 1, lines 6-9.) Further details of this appealed subject matter are recited in representative claim 27, the only independent claim on appeal, reproduced below:

27. A breathable composite sheet material comprising a substrate and a thermoplastic film adhered directly to the substrate in the absence of an adhesive,
said thermoplastic film comprising
at least 50% by weight of a Fraction A consisting essentially of polymer from the group of block copolyether esters, block copolyether amides and polyurethanes,
at least 5% by weight of a Fraction B consisting essentially of polymer that is incompatible with Fraction A, and
at least 0.1% by weight of a Fraction C consisting essentially of a compatibilizer for Fractions A and B; and
said substrate comprising at least 50% by weight

¹ The appellants' request for a continued prosecution application filed May 30, 2001 (paper 15) included an instruction for the entry of an "unentered" amendment previously filed on Apr. 30, 2001 (paper 12). We note, however, that this amendment has not been clerically entered. The examiner should attend to this matter upon receipt of this application.

of a polyolefin that is incompatible with film
Fraction A.

The examiner relies on the following prior art references
as evidence of unpatentability:

Weinberger et al. (Weinberger)	5,650,223	Jul. 22, 1997 (filed Jun. 11, 1996)
Brown et al. (Brown)	5,662,978	Sep. 2, 1997 (filed Sep. 1, 1995)
Cardinal et al. (Cardinal) (published PCT application)	WO 95/16746	Jun. 22, 1995

Claims 27 through 36 on appeal stand rejected under 35
U.S.C. § 103(a) as unpatentable over Cardinal in view of Brown
or Weinberger. (Examiner's answer mailed Nov. 5, 2002, paper
26, pages 3-5.)

We reverse this rejection. Although we are in substantial
agreement with the appellants' position as stated in the appeal
brief filed Aug. 19, 2002 (paper 25), we add the following
comments for emphasis.

Cardinal, the principal prior art reference, describes a
thermoplastic composition containing a mixture of: (a) a block
copolyether ester, a block copolyether amide, and/or a
polyurethane; (b) a thermoplastic homo-, co-, or terpolymer that
is incompatible with (a); and (c) a compatibilizer. (Page 1,
lines 30-36.) According to Cardinal, components (a), (b), and

(c) are typically present in the composition in amounts ranging from 25 to 90% by weight, 10-70% by weight, and 0.1 to 15% by weight, respectively. (Page 3, lines 18-20; page 5, lines 5-6; page 6, lines 4-6.) Cardinal explains the characteristics of the thermoplastic composition as follows (page 1, lines 3-18):

This invention relates to a thermoplastic composition and its use in preparing films demonstrating moisture vapor, oxygen and carbon dioxide permeability, while acting as barriers to liquids and microorganisms such as viruses and bacteria. Such films are found in various articles including wound coverings, transdermal patches, operating room drapes, protective clothing, diapers, personal hygiene products (feminine hygiene, incontinency), waterproof and outdoor clothing articles, food packaging such as for fresh vegetables, fruit, cheese and meat, films used in plant growing environments and any end-use where it is desirable to combine "breathability" and liquid barrier properties to liquids and microorganisms.

Films made from the inventive compositions also demonstrate good adhesion to substrates made from materials containing certain functional groups that react with the "reactive groups" described hereinafter. Such substrates include melamine.
[underscoring added.]

Unlike Cardinal, Brown teaches a protective cover for vehicles and equipment made from conjugate fiber nonwoven fabric having a basis weight between about 1 and 8 osy laminated with a film, such as an ethylene-vinyl acetate copolymer, polyvinyl chloride, polyamide, or polyolefin film. (Column 1, lines 16-17 and 40-43; column 6, lines 46-51; column 8, lines 62-65.) According to Brown, "[t]he conjugate fibers may be in a

configuration such as sheath/core, side-by-side, segmented pie and islands in the sea and may be formed from polyolefins and polyamides." (Column 1, lines 43-46; see also column 7, lines 21-26.) Brown further teaches that "[t]he film may be formed directly onto the nonwoven web and cured in contact with it." (Column 9, lines 40-41.)

Weinberger discloses an absorbent article, such as a sanitary napkin, which "has a pair of undergarment covering components (or "side wrapping elements") that provide coverage to the wearer's panties to reduce side rolling (i.e., staining of the edges of the panties crotch) without the use of conventional flaps." (Column 2, lines 59-65.) In addition, the sanitary napkin is said to comprise a main body portion comprising a liquid pervious topsheet, a liquid impervious backsheet joined to the topsheet, and an absorbent core positioned between the topsheet and the backsheet. (Column 2, line 66 to column 3, line 2.) Weinberger further states (column 8, lines 17-62):

The side wrapping elements 50 can be made from any of the materials used in the construction of the main body portion 21 of the sanitary napkin. The side wrapping elements 50 in the embodiment shown in FIGS. 1-3 preferably comprise a laminate of three materials, a soft extensible coverstock material such as a longitudinally extensible spunbond nonwoven web or a soft extensible formed film, an extensible intermediate layer such as a three dimensional formed

film, and an extensible liquid impervious backing such as a polyethylene film backsheet material.

The coverstock material preferably comprises a spunbonded polyethylene nonwoven web having a basis weight of between about 15 gsm and 60 gsm...

The extensible intermediate layer preferably comprises a variation of a three dimensional formed film known as DRI-WEAVE which is used as a topsheet on sanitary napkins manufactured by the Procter & Gamble Company, Cincinnati, Ohio under U.S. Pat. Nos. 4,342,314 issued to Radel, et al. and U.S. Pat. No. 4,463,045 issued to Ahr, et al. The three dimensional film has an embossed thickness of between about 15 mils to about 35 mils (about 0.38 mm to about 0.89 mm) and is not apertured all the way through as in the case of DRI-WEAVE topsheet material, but is formed so that the apertures are closed off on the side of the film that would ordinarily face away from the wearer's body in use. The formed film resin composition is modified by adding a blend of linear low density polyethylene ("LLDPE") and high density polyethylene ("HDPE") such that the formed film is capable of extending between about 60% and about 200% in the longitudinal direction. The formed film is preferably extrusion coated onto the nonwoven web.

When we compare the subject matter of appealed claim 27 to Cardinal's disclosure, we find that Cardinal does not disclose the recited "substrate comprising at least 50% by weight of a polyolefin that is incompatible with film Fraction A." This difference notwithstanding, the examiner held (answer, pages 4-5):

Brown and Weinberger are concerned with the creation of laminates useful as diapers. Said laminates comprising a nonwoven polyolefin web and a film (abstract and col. 8, lines 20-30, respectively) [sic]. Both patents teach extrusion coating said film to said nonwoven web (abstract and col. 8, lines 55-63, respectively). It would have been obvious to a

person having ordinary skill in the art to extrusion coat the film of Cardinal to the polyolefin nonwoven webs of Brown and Weinberger. The skilled artisan would have been motivated to laminate said film to said webs by the reasoned expectation of utilizing Cardinal's film in a commercially viable product, i.e. a diaper. The examiner notes that polyolefin is the most commonly used polymer in the nonwoven diaper art and, as such, is the most readily available and the least expensive material. Polyolefins webs are also commonly used in diapers because they provide a desirable level of comfort and softness. The skilled artisan would have been motivated to directly extrusion coat said film to said web by the desire to eliminate the need to purchase additional components, such as adhesives.

We see no merit in the examiner's stated position. To properly reject claims under 35 U.S.C. § 103 as prima facie obvious in view of a combination of prior art references, an examiner must consider, inter alia, two factors: (1) whether the prior art would have suggested to one of ordinary skill in the art to make the claimed composition or carry out the claimed process; and (2) whether the prior art would also have revealed that, in so making or carrying out, the person of ordinary skill would have had a reasonable expectation of success. In re Vaeck, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991) (citing In re Dow Chemical Co., 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988)). Both the suggestion and reasonable expectation of success must be founded in the prior art, not in the applicants' disclosure. Id.

In this case, neither the suggestion nor the reasonable expectation of success is founded in the prior art. Specifically, the examiner has not identified the evidentiary basis for asserting that one of ordinary skill in the art would have been led to "extrusion coat the film of Cardinal to the polyolefin nonwoven webs of Brown and Weinberger." (Answer, page 4.) As pointed out by the appellants (appeal brief, page 3), Cardinal teaches that the thermoplastic films demonstrate good adhesion to substrates made from materials containing certain functional groups that react with the reactive groups on the thermoplastic film, e.g. substrates including melamine. By contrast, the polyolefin nonwoven webs of Brown and Weinberger have not been shown by the examiner to contain any functional groups, much less functional groups that are reactive to the types of reactive groups described for Cardinal's thermoplastic film.

While the examiner alleges that one of ordinary skill in the art would have known that Cardinal's thermoplastic film can be adhered to a polyolefin substrate and that reactive bonds would not be necessary for diapers (answer, pages 5-6), such unsupported statements are based on speculation rather than fact or objective evidence. In re Lee, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002) ("The factual inquiry

whether to combine references must be thorough and searching.'...It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with."); W.L. Gore & Assoc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983) ("To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.").

The examiner argues that "[t]he inclusion of the word 'also' [at Cardinal's page 1, line 15] implies that Cardinal intends its film to be adhered to other substrates that do not contain reactive groups." (Answer, page 5.) The examiner's argument is not well taken, because we find no such intention in Cardinal. The description at Cardinal's page 1, lines 15-18 pertains to an additional property of the thermoplastic composition. Also, as pointed out by the appellants (appeal brief, page 6), the relied upon prior art disclosure falls far short of suggesting or even hinting to one of ordinary skill in the art that Cardinal's thermoplastic film may be adhered to a polyolefin substrate.

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Accordingly, it is our judgment that the examiner has not made out a prima facie case of obviousness against any of the appealed claims within the meaning of 35 U.S.C. § 103. In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984).

In summary, we reverse the examiner's rejection under 35 U.S.C. § 103(a) of appealed claims 27 through 36 as unpatentable over Cardinal in view of Brown or Weinberger.

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The decision of the examiner is reversed.

REVERSED

Terry J. Owens)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
Romulo H. Delmendo)	
Administrative Patent Judge)	APPEALS AND
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